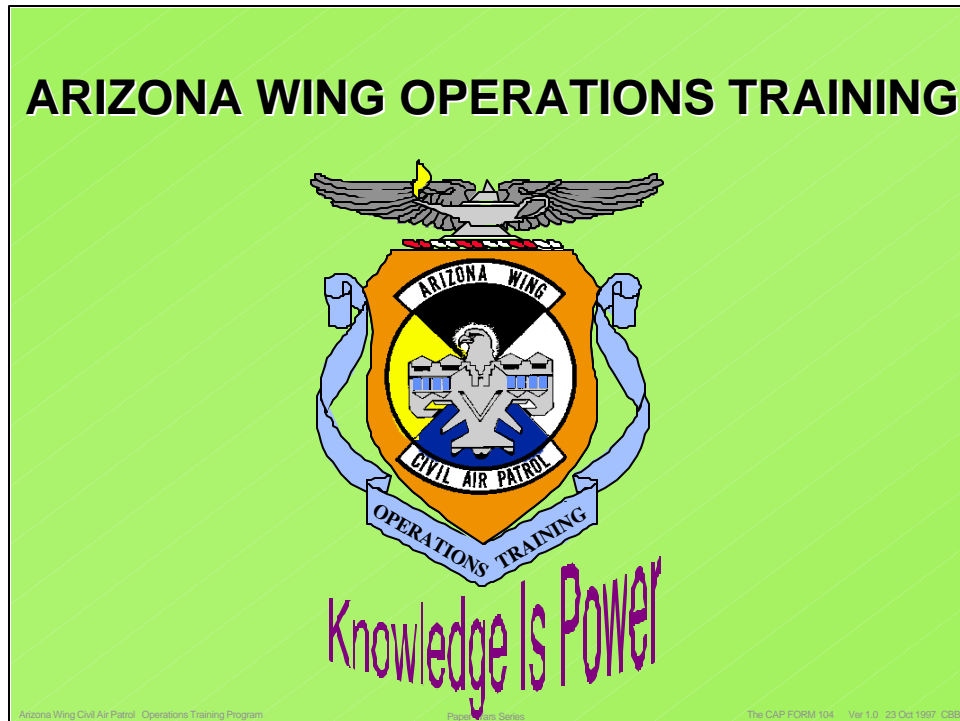


AZ WING Operation Training Instructor Notes

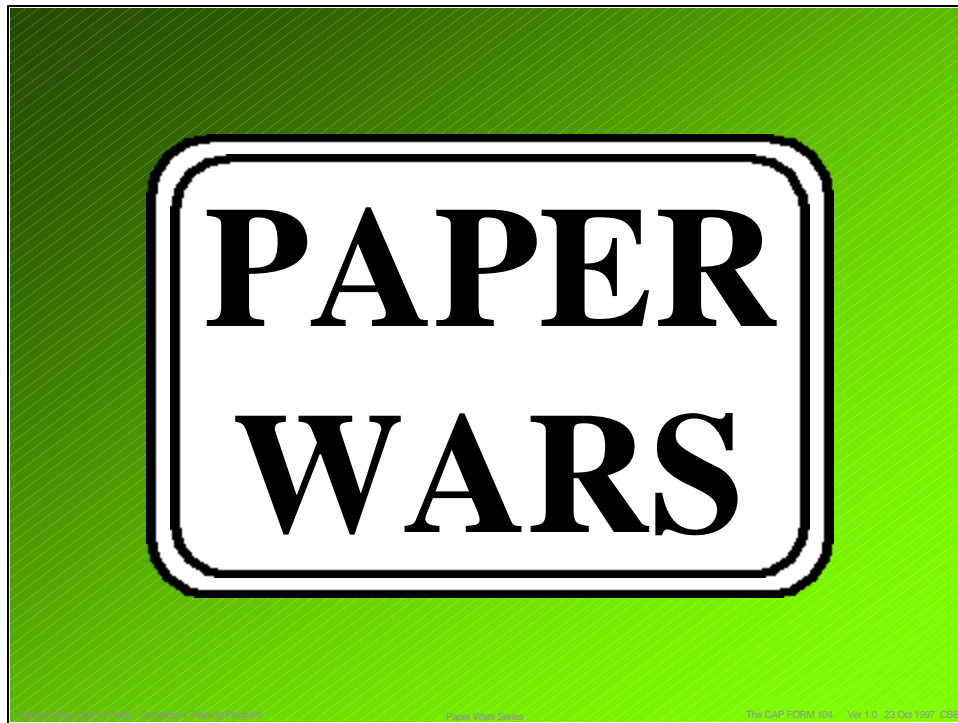
The CAP Form 104



Welcome.

AZ WING Operation Training Instructor Notes

The CAP Form 104



Paper Wars is a series of training programs to educate CAP members on CAP forms. It was developed to help reduce the number of paper work errors.

Paper work errors has cost CAP a significant amount of time and money.

At each closing day of a mission, additional hours are spent on auditing the day's paper work. Unfortunately, it is very typical of having over 50% of the time spent on correcting information and filling in the missing information.

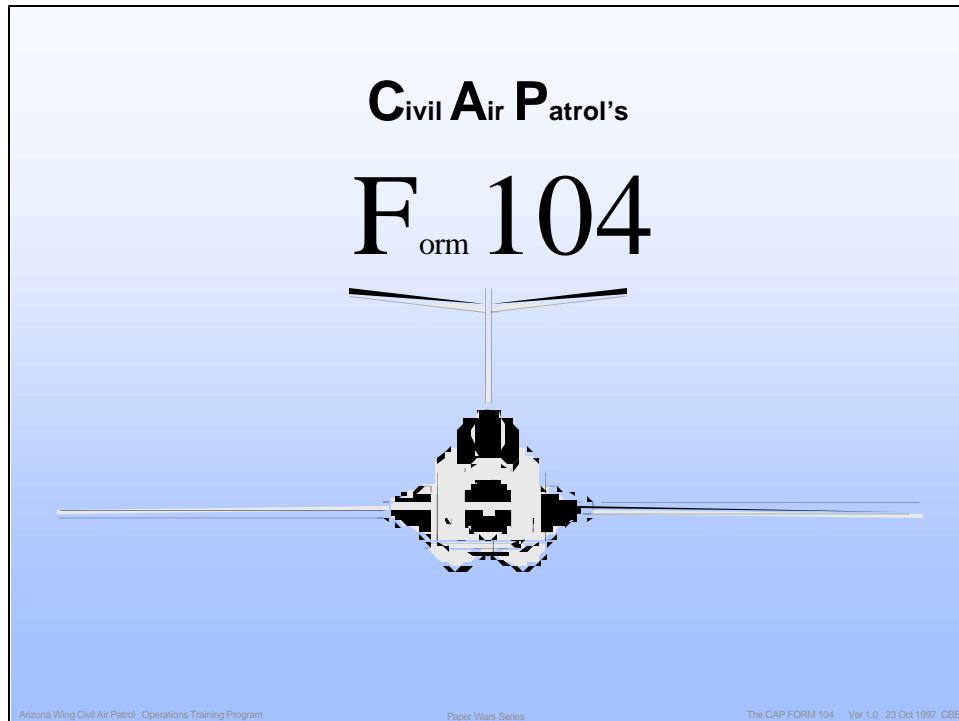
It is very easy to say, that a mission auditors will spend at less 5 to 7 hours after the day's end on this problem. And this is just catching the first 70% of the errors for that day.

Now multiply this by the end of the mission. Who catches the other 30%? Multiply the time by the Air Force Auditors and by the Air Force Finance Community. An estimated 112 man hours per mission is spent on finding and correcting errors.

The delays are sometimes in the months, and rarely sometime over a year, before reimbursement is given.

AZ WING Operation Training Instructor Notes

The CAP Form 104



Introducing the CAP Form 104. The CAPF 104 is one of the most important forms, if not the most important in the Civil Air Patrol arsenal. It has the misrepresentation of being one of the most complicated form to fill out.

It is, however, the main stay of our air search and rescue.

It is the first of the long line of account and billing forms.

And it is a legal document for the mission.

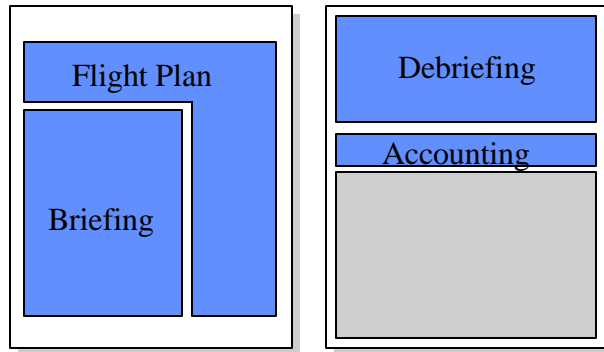
The CAP Form 104



The CAP form 104 is actually four forms in one. This make for a nice compact information gathering on a single piece of paper.

AZ WING Operation Training Instructor Notes

The CAP Form 104



Four forms in one:

1. **Flight Plan**
2. **Briefing**
3. **Debriefing**
4. **Accounting**

Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

This form covers four main topics:

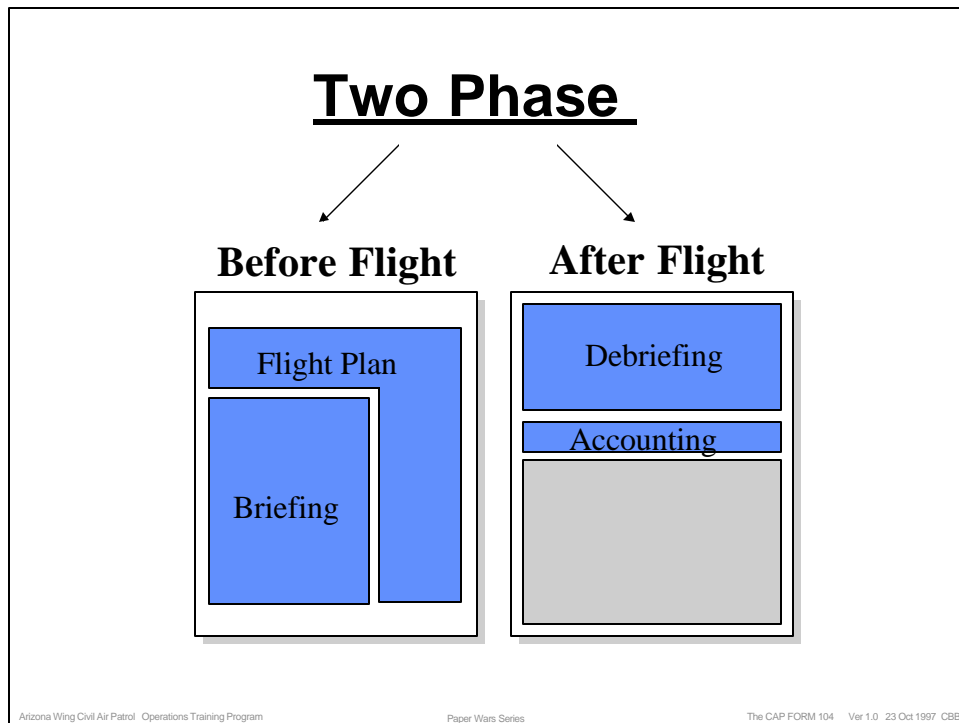
It's your Flight Plan Form

It's your Briefing Form

It's your Debriefing Form

And it's your Flight Accounting Form

The CAP Form 104



This form is used in two phases.

The front side is used for your preflight and flight phase

The back side is used for your post flight phase

AZ WING Operation Training Instructor Notes

The CAP Form 104

Two Copies

The CAP Form 104, Ver 1.0, 23 Oct 1997 CBB. The form is titled 'The CAP Form 104' and contains various fields for flight information, mission objectives, and aircraft details. It is presented as two overlapping copies on a blue background.

When you have two phases, you can except two copies must be made. As a rule of thumb, always make two or more copies. One is always with you in the aircraft, while the other is always on the ground.

That means, when flying to the mission base, You should have a front filled copy with you on the aircraft while the other is at your base of operation.

When flying sorties, the mission base must a copy of your 104!

If you wish to retain a 104 for your records, make a third copy.

Even if just for practicing, a CAPF 104 should be filled out for every flight.

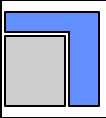
At the conclusion of each flight, the Accounting portion of the flight should be completed.

AZ WING Operation Training Instructor Notes

The CAP Form 104

CREW QUALIFICATION PILOT: Ach Type ____ Night ____ Instrument ____ Mountain ____ CO-PILOT: Mission ____ Trainee ____ OBSERVER: Mission ____ Trainee ____ OBSERVER: Mission ____ Trainee ____		<input type="checkbox"/> CAP RADIO FREQ <input type="checkbox"/> POLICE RADIO FREQ <input type="checkbox"/> VOR <input type="checkbox"/> ADF <input type="checkbox"/> ELT <input type="checkbox"/> NIGHT FLIGHT <input type="checkbox"/> INSTRUMENT FLT <input type="checkbox"/> FIRE EXTINGUISHER <input type="checkbox"/> FIRST AID KIT	<input type="checkbox"/> SIGNAL PANELS <input type="checkbox"/> FLARES <input type="checkbox"/> MESSAGE DROPS <input type="checkbox"/> SURVIVAL KIT <input type="checkbox"/> TRANSPONDER <input type="checkbox"/> DIRECTION FINDER	FLIGHT PLAN INFO CAP <input type="checkbox"/> FILED FAA <input type="checkbox"/> IFR <input type="checkbox"/> VFR <input type="checkbox"/> AIRCRAFT NUMBER AIRCRAFT TYPE TRUE AIRSPEED POINT OF DEPARTURE ETD/ATD OUTBOUND / INBOUND ALTITUDE ROUTE OF FLIGHT DESTINATION AIRPORT CITY ESTIMATED TIME ENROUTE HRS. MIN. FUEL ON BOARD HRS. MIN. ALTERNATE AIRPORT PILOT'S NAME PILOT'S ADDRESS PILOT'S PHONE NO. NO OF PERSONS ABOARD COLOR OF AIRCRAFT PROPOSED LDG TIME ACTUAL LDG TIME FAA FLT PLAN CLOSED <input type="checkbox"/>
--	--	---	---	---

THE FLIGHT PLAN



Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

Let begin with the Flight Plan portion of the form.

In CAP flying there are two **MAIN** types flight plan.

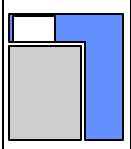
There is the CAP flight plan and the FAA flight plan. With either flight plan, this form must be completed.

On CAP flight plans and Operation and Clearance authorization is required.

AZ WING Operation Training Instructor Notes

The CAP Form 104

CREW QUALIFICATION	
PILOT: Acft Type	<u> X </u> Night <u> X </u>
<i>Jet, Ram Maj.</i>	
Instrument	<u> </u> Mountain <u> X </u>
CO-PILOT: Mission	<u> X </u> Trainee <u> </u>
<i>Email, Buz Capt.</i>	
OBSERVER: Mission	<u> X </u> Trainee <u> </u>
<i>Coyote, Wilde E. 1Lt.</i>	
OBSERVER: Mission	<u> </u> Trainee <u> X </u>
<i>Lou, Euky SM.</i>	



Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

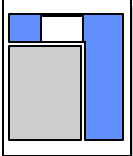
The first part of the flight plan is “Who is aboard and at what capacity. This is where the Pilot and Crew and Qualification are reported.

Check what applies.

AZ WING Operation Training Instructor Notes

The CAP Form 104

<input checked="" type="checkbox"/> CAP RADIO FREQ	<input checked="" type="checkbox"/> SIGNAL PANELS
<input type="checkbox"/> POLICE RADIO FREQ	<input type="checkbox"/> FLARES
<input checked="" type="checkbox"/> VOR	<input type="checkbox"/> MESSAGE DROPS
<input type="checkbox"/> ADF	<input checked="" type="checkbox"/> SURVIVAL KIT
<input checked="" type="checkbox"/> ELT	<input checked="" type="checkbox"/> TRANSPONDER
<input checked="" type="checkbox"/> NIGHT FLIGHT	<input type="checkbox"/> DIRECTION FINDER
<input type="checkbox"/> INSTRUMENT FLT	<input checked="" type="checkbox"/> GPS
<input checked="" type="checkbox"/> FIRE EXTINGUISHER	<input type="checkbox"/>
<input checked="" type="checkbox"/> FIRST AID KIT	<input type="checkbox"/>



Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

The next section list the type of **functioning** equipment on board. It is important to check all that applies.

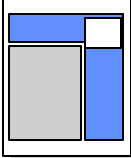
Add any other equipment that you feel necessary.

You never know if a hot lead or an important mission may require your aircraft services and the only way the mission coordinator may know is from your 104.

AZ WING Operation Training Instructor Notes

The CAP Form 104

FLIGHT PLAN INFO	
<input type="checkbox"/> CAP	
<input checked="" type="checkbox"/> FILED FAA	
<input type="checkbox"/> IFR	<input checked="" type="checkbox"/> VFR
AIRCRAFT NUMBER	
<i>N8124U</i>	
AIRCRAFT TYPE	
<i>C-182R</i>	
TRUE AIRSPEED	
<i>120 Kts</i>	
POINT OF DEPARTURE	
<i>E69 Payson, AZ</i>	



Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

Check here if your filing CAP or FAA. Note the FAA has two more choices, one is for Visual Flight Rules and the other is for Instrument Flight Rules.

Very much the FAA flight plan, this column is where you insert the aircraft and destination information.

AZ WING Operation Training Instructor Notes

The CAP Form 104

POINT OF DEPARTURE
ETD/ATD
OUTBOUND / INBOUND ALTITUDE
ROUTE OF FLIGHT D irect Grid 374 AD Direct E69
DESTINATION AIRPORT
CITY E69 Payson
ESTIMATED TIME ENROUTE HRS. MIN.
FUEL ON BOARD HRS. MIN.
ALTERNATE AIRPORT None
PILOT'S NAME Jet, Ram
PILOT'S ADDRESS 727 Red Baron Road , Pine, AZ
PILOT'S PHONE NO. (520) 555-4142
NO OF PERSONS ABOARD 4
COLOR OF AIRCRAFT Blue / White trim
PROPOSED LDG TIME
ACTUAL LDG TIME
FAA FLT PLAN CLOSED <input type="checkbox"/>

CREW QUALIFICATION

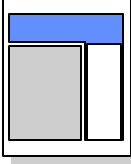
PILOT: Acft Type ☒ Night ☒
Jet, Ram Maj.
Instrument ☐ Mountain ☒

CO-PILOT: Mission ☒ Trainee ☐
Emall, Buz Capt.

OBSERVER: Mission ☒ Trainee ☐
Coyote, Wilde E. 1Lt.

OBSERVER: Mission ☐ Trainee ☒
Lou, Euky SM.

Checks and Balances
Information Should Match



Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

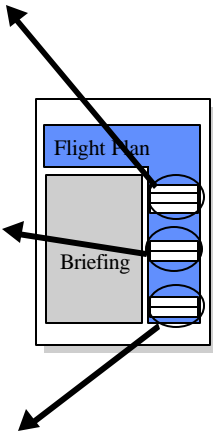
Checks and Balances.

It a good Idea to have the same name in both pilots slots as well as the correct number of people on board.

AZ WING Operation Training Instructor Notes

The CAP Form 104

ETD/ATD	06:30 LCL
OUTBOUND / INBOUND ALTITUDE	
9500 / 8500	
ESTIMATED TIME ENROUTE	
3 HRS.	30 MIN.
FUEL ON BOARD	
4 HRS.	30 MIN.
PROPOSED LDG TIME	
10:00 LCL	
ACTUAL LDG TIME	



The diagram shows a simplified version of the CAP Form 104. It has a blue header labeled 'Flight Plan' and a grey body labeled 'Briefing'. To the right of the 'Briefing' section are five horizontal ovals. Arrows point from the 'OUTBOUND / INBOUND ALTITUDE' field to the top oval, from the 'ESTIMATED TIME ENROUTE' field to the second oval, and from the 'PROPOSED LDG TIME' field to the bottom oval.

Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

The accounting starts here, in the flight plan section.

This includes:

When are you taking off.

How High in route.

How long will you be out.

When mission base starts to panic.

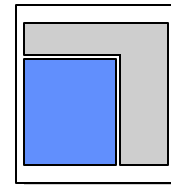
And when you are expect back before mission base starts looking for you.

AZ WING Operation Training Instructor Notes

The CAP Form 104

THE BRIEFING

MISSION OBJECTIVES:	
SEARCH AREA / ROUTE (DESCRIPTION)	
TERRAIN / GROUND COVER	
TYPE OF SEARCH PATTERN(S)	
DIRECTION OF TRACKS	TRACK SPACING
SEARCH ALTITUDE	SEARCH AIRSPEED
HAZARDS TO FLIGHT	
MILITARY LOW ALTITUDE TRAINING ROUTES	
AIRCRAFT SEPARATION (ADJOINING AREAS)	
EMERGENCY FIELDS	
WEATHER CURRENT LOCAL	FORECAST LOCAL
WEATHER CURRENT SEARCH AREA	FORECAST SEARCH AREA
MISSION BASE CALL SIGN	FREQUENCIES FM - VHF - HF
MOBILE CALL SIGN	FREQUENCIES FM - VHF
MOBILE LOCATIONS	
WHO TO CONTACT AND WHEN	
ACTIONS TO BE TAKEN IF SAR OBJECT IS LOCATED	
CODEWORDS	
RECALL FIND	



Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

The other part for the preflight phase is the briefing.

Lets face it, you can't go out on a mission if you don't know what your looking for!

AZ WING Operation Training Instructor Notes

The CAP Form 104

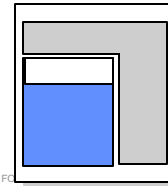
Mission Objectives

MISSION OBJECTIVES:

Search and Rescue: Overdue Aircraft N12345 Green/White trim

SEARCH AREA / ROUTE (DESCRIPTION)

Grid 374AD



Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM

First part of the briefing is the mission objective. Here is where you put down your mission.

Your mission can be from anything from Search and Rescue, to transport flights, to cadet orientation rides.

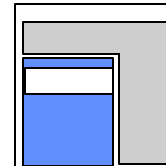
Next you plug in the grid or route of flight.

AZ WING Operation Training Instructor Notes

The CAP Form 104

Search Planning

TERRAIN / GROUND COVER Mountains and Heavy Tree Cover	
TYPE OF SEARCH PATTERN(S) Contour and Parallel	
DIRECTION OF TRACKS East/West	TRACK SPACING 1 NM
SEARCH ALTITUDE 700 AGL	SEARCH AIRSPEED 120 Kts



Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM

The search and planning part.

This is where you should have completed for preflight planing. You should already know how your going to fly your assignment and what you are going to do.

AZ WING Operation Training Instructor Notes

The CAP Form 104

Hazardous Operations

HAZARDS TO FLIGHT

High Tension Power Lined (North and South) High Mountains terrain

MILITARY LOW ALTITUDE TRAINING ROUTES

IR-423 and IR-357 Active

AIRCRAFT SEPARATION (ADJOINING AREAS)

345 CD 374BC 403AB

EMERGENCY FIELDS

None

WEATHER CURRENT LOCAL

Clear

FORECAST LOCAL

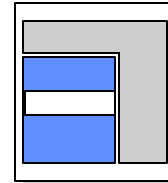
1900Z -TRW

WEATHER CURRENT SEARCH AREA

1000 SCR 4000 BRK 6000 OVC

FORECAST SEARCH AREA

1900Z 1000 BRK 4000 OVC TRW



Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

Next come the known hazards of your flight. This information is crucial to your personal safety and should not go unchecked.

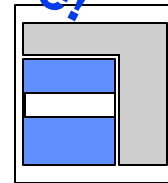
This includes any item that can threaten your safe flight. From items in your grid to military routes in and to and from your grid. To aircraft separations and current and forecasted weather.

AZ WING Operation Training Instructor Notes

The CAP Form 104

Hazardous Operations

HAZARDS TO FLIGHT High Voltage Power Lined (North and South) High Mountains terrain	
MILITARY LOW ALTITUDE TRAINING ROUTES IR-423 and IR-357 Active	
AIRCRAFT SEPARATION (ADJACENT AREAS) 345 CD 374BC 403AB	
EMERGENCY FIELDS None	
WEATHER CURRENT LOCAL Clear	FORECAST LOCAL 1900Z -TRW
WEATHER CURRENT SEARCH AREA 1000 SCR 4000 BRK 6000 OVC	FORECAST SEARCH AREA 1900Z 1000 BRK 4000 OVC TRW



Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

Noticed something wrong!

What is wrong with this picture.

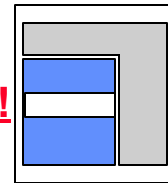
AZ WING Operation Training Instructor Notes

The CAP Form 104

Hazardous Operations

HAZARDS TO FLIGHT High Tension Power Lined (North and South) High Mountains terrain	
MILITARY LOW ALTITUDE TRAINING ROUTES IR-423 and IR-357 Active	
AIRCRAFT SEPARATION (ADJOINING AREAS) 345 C 374BC 403AB	
EMERGENCY FIELDS None	
WEATHER CURRENT LOCAL Clear	FORECAST LOCAL 1900Z -TRW
WEATHER CURRENT SEARCH AREA 1000 SCR 4000 BRK 6000 OVC	FORECAST SEARCH AREA 1900Z 1000 BRK 4000 OVC TRW

An other aircraft in the same Grid!!!!



Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

How do like sharing your grid with another aircraft at the same time?

Is this a paperwork error, copied down wrong.

Or is it operations error.

The latter can have disastrous effects.

Question everything; don't let any detail go that may risk your safety.

AZ WING Operation Training Instructor Notes

The CAP Form 104

A	B
374	374
C	D

Your Assigned Grid 374AD

Another Assigned Grid 374BC

Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

Unusual as it may seem, the checkerboard grid assignment does come up from time to time.

Grid 374 A and D, this was your assignment. An other aircraft was assigned 374 B and C.

The only other worst condition would be, to have another aircraft in the same grid at the same time.

Where corner assignment tend to minimize the risk, adjacent grids tend to maximized the risk of collision. Just think of it; two planes, same search altitude, and all eyes looking down. One wanders into the other's airspace.

All that have tried to disproving Newton's law have failed. You know, the law of what happens when you try to occupy the same space at the same time.

The CAP Form 104



Most failed with deadly results.

Anytime you suspect your sortie has a safety compromise.

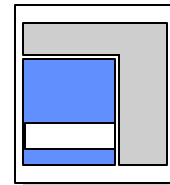
Don't fly it!

AZ WING Operation Training Instructor Notes

The CAP Form 104

Contacts

MISSION BASE CALL SIGN Mission Base or RR 99	FREQUENCIES FM - VHF - HF FM 148.150 VHF 123.1
MOBILE CALL SIGN RR 111	FREQUENCIES FM - VHF FM 148.150
MOBILE LOCATIONS Grid 347	



Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

We have Contact!

Do you know your contacts?

Who are you go'in to call?

It's nice to know who and how to contact on your mission. Here's where you put it.

AZ WING Operation Training Instructor Notes

The CAP Form 104

Action Plan

WHO TO CONTACT AND WHEN

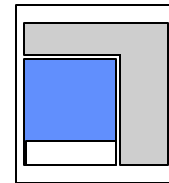
Contact mission base within 10 minutes on every hour.

ACTIONS TO BE TAKEN IF SAR OBJECT IS LOCATED

Contact mission base, don't not give out location until instructed.

CODEWORDS

RECALL **Come'on Back.** FIND **SunShine**

Arizona Wing Civil Air Patrol Operations Training ProgramPaper Wars SeriesThe CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

You now know all about the mission and who will be in contact with you.
Now all you need to know is. . . What to do?!

You need an action plan.

What to do while on your mission and what to do when you have a sighting.

Code words are a touchy subject with the FCC, but sometime necessary to avoid eavesdroppers. The media can be very helpful in the rescue phase, however they can be very hazardous in the identifying or recover phase.

Two code words you might find is for Recalling and/or reporting a possible Find. Like, "I have Sunshine. . in the early morning. ." or "Come'on back here you'll" Actually sing over the radio may not be a good idea. But you have the jest of this.

AZ WING Operation Training Instructor Notes

The CAP Form 104

Finishing Touches

Mission Number!

97M123

Date

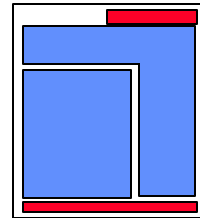
10 Oct 97

Pilot's signature

Ram Jet

Operations signature

Clearance signature



Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

Now your ready to go out and fly.

Before you go, look over your form.

You need to have the correct date, mission number and have signed your form.

Before being released on a sortie, you will need to have the Operations and Clearance authorization first.

AZ WING Operation Training Instructor Notes

The CAP Form 104

Remember!

**If it doesn't have a
mission number,
It didn't happen!**

**Always put a mission number
down on all papers!**

Even on scrap paper

Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

Remember!

If it doesn't have a mission number, It didn't happen!

Without this numbered You **are not** covered by insurance.

After the completion of the flight, fill out the remaining blocks on the front side.

All pieces of papers will need to have the mission number written on it. Even the scrap paper you use.

AZ WING Operation Training Instructor Notes

The CAP Form 104

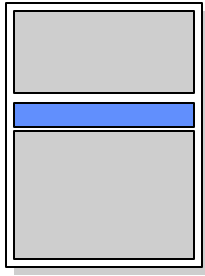


If you filled a FAA flight plan, or even a CAP flight plan for that fact. Don't forget to close it!

Don't be a FOG.

AZ WING Operation Training Instructor Notes

The CAP Form 104

<h1>THE ACCOUNTING</h1>		
Flying Time: Enroute (<i>To / From grid</i>) _____ Hrs	Search Time (<i>in Grid</i>) _____ Hrs	Total _____ Hrs
		
<small>Arizona Wing Civil Air Patrol Operations Training Program</small>	<small>Paper Wars Series</small>	<small>The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB</small>

Now that you have completed your flight and closed your flight plan.

You've now entered the. . . **ACCOUNTING ZONE!**

Do do do do. . . Do do do do!

For the private pilots; It's PAY DAY! Because, without a copy of this correct CAP form 104, submitted with a correct CAP form 108, you don't get paid!

For everyone else, without a copy of this correct CAP form 104, you don't fly!

Again . . . Ever. . . well maybe it's not that severe. But what really happens is that the wing may not get their reimbursement or not paid at all.

HEAVY! isn't it.

AZ WING Operation Training Instructor Notes

The CAP Form 104

THE ACCOUNTING

Flying Time: Enroute (<i>To / From grid</i>) _____ Hrs	Search Time (<i>in Grid</i>) _____ Hrs	Total _____ Hrs
--	---	-----------------

Enroute + Search = Total Time

Debriefing

Accounting

Debriefing

Arizona Wing Civil Air Patrol Operations Training Program

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

The accounting part of the form require some of the most advance math skills.

You need to know how to add.

Let see. . . Time enroute plus time in search area, equals total time.

AZ WING Operation Training Instructor Notes

The CAP Form 104

ETD/ATD	06:30 LCL
	7:09 LCL
OUTBOUND / INBOUND ALTITUDE	9500 / 8500
ESTIMATED TIME ENROUTE	3 HRS. 30 MIN.
FUEL ON BOARD	4 HRS. 30 MIN.
PROPOSED LDG TIME	10:00 LCL
ACTUAL LDG TIME	10:32 LCL

Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

On the front side you have filled in the actual time you took off.

Filled in the actual time you landed. (By the way you closed your flight plan.)

On your scrap paper you recorded when you reported the:

Time off the ground.

Time in the Grid

Time out of the Grid

and the Time on the Ground.

AZ WING Operation Training Instructor Notes

The CAP Form 104

THE ACCOUNTING

Flying Time: Enroute (<i>To / From grid</i>) <u>1.0</u> Hrs	Search Time (<i>in Grid</i>) <u>2.5</u> Hrs	Total <u>3.5</u> Hrs
---	--	----------------------

Enroute + Search = Total Time

Clock Time
10:32 LCL
- 7:09 LCL

3:23 or 3.4 Hours

Total Time MUST! equal total Hobbs Time

Ending Hobbs	3455.8
Beginning Hobbs	3452.3
<hr/> Total Hobbs	<hr/> 3.5

Clock time should come close

Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

But wait!

The time you put in on the back side is your Hobbs time!

For the billing purposes, we always use Hobbs time or close to it. If you have only tach time, you could use actual time or multiply the tach time by a factor of 1.1 to get close to Hobbs time.

Your actual flight, clock, time need to be very close to your Hobbs time for form validation.

Remember, Enroute Time plus Search Time, always equals Total Hobbs Time.
No exceptions!

AZ WING Operation Training Instructor Notes

The CAP Form 104

Every 6 minutes = 1/10 hour

6 minutes	→ 0.1 hours
12 minutes	→ 0.2 hours
18 minutes	→ 0.3 hours
24 minutes	→ 0.4 hours
30 minutes	→ 0.5 hours
36 minutes	→ 0.6 hours
42 minutes	→ 0.7 hours
48 minutes	→ 0.8 hours
54 minutes	→ 0.9 hours
60 minutes	→ 1.0 hours

Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

To convert minutes to tenths of hours use this table.

For every 6 minutes of the hour, is equivalent to one tenth of an hour.

In the last example, 23 minutes is closer to 24 minutes. So your report 0.4 hours and then add them to the 3 full hours flown. You have 3.4 hours.

AZ WING Operation Training Instructor Notes

The CAP Form 104

THE DEBRIEFING

TYPE OF SEARCH: Visual _____ Electronic _____		SEARCH PATTERNS USED: _____	
SEARCH VISIBILITY: (Distance you can see an auto clearly) _____ NM		SEARCH ALTITUDE: (Above ground) _____ AGL	SEARCH SPEED: _____ Kts
TRACK SPACING: _____ NM			
SECTIONAL GRIDS SEARCHED: (Numbers) _____ #	A B C D, _____ #	A B C D, _____ #	A B C D, _____ #
SEARCHED: Route / Electronically _____			
TIME OF DAY: _____ to _____	Crew Comments about Effectiveness Exec _____ Good _____ Fair _____ Poor _____		
OBSERVERS/ SCANNERS: Number _____		Crew Remarks of SAR Effectiveness _____	
TERRAIN: Flat _____	Rolling Hills _____	Rugged Hills _____	Mtns _____
COVER: Open _____	Moderate _____	Heavy _____	Light Snow _____
COORDINATES OF SIGHTINGS: (Lat/Long) _____			TURBULENCE: Light _____ Mod _____ Heavy _____
			Deep Snow _____
			VOR Radials _____
NOTE: If part of grid as searched, draw area covered below in relation to landmarks. indicate sightings.			

Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 CBB

Now for the most important part of the 104.

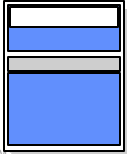
The Debriefing.

Without the debriefing done. The mission coordinator has no clue. On idea of what has happened. Nothing to work with to plan the next days mission. No statistics to know when to go on.

Not done properly will cost dearly in resources and threaten the success of the mission.

AZ WING Operation Training Instructor Notes

The CAP Form 104

<h1 style="margin: 0;">What did you do?</h1>	
TYPE OF SEARCH: Visual <u> X </u> Electronic <u> </u>	SEARCH PATTERNS USED: Contour and Parallel
SEARCH VISIBILITY: (Distance you can see an auto clearly) <u> 3 </u> NM	SEARCH ALTITUDE: (Above ground) <u> 700 </u> AGL
SEARCHED: (Numbers) <u> 374 </u> <u> A </u> B C D, # <u> 346 </u> A B <u> C </u> D, # A B C D, # A B C D,	SEARCH SPEED: <u> 100 </u> Kts TRACK SPACING: <u> 1 </u> NM
SEARCHED: Route / Electronically <u> N/A </u> to to to	
TIME OF DAY: <u> 07:30 </u> to <u> 10:00 </u>	Crew Comments about Effectiveness Exec <u> X </u> Good <u> </u> Fair <u> </u> Poor <u> </u>
OBSERVERS/ SCANNERS: Number <u> 3 </u>	Crew Remarks of SAR Effectiveness The coffee' mocha could have used a touch more cinnamon
	
Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 CBB	

Now is the time to report what you have done.

What type of search?

How you searched it?

Where did you search?

When did you search?

And how was the search?

I guess the on this flight, the flight steward was having an off day.

AZ WING Operation Training Instructor Notes

The CAP Form 104

Search Visibility

TYPE OF SEARCH: Visual <input checked="" type="checkbox"/> Electronic <input type="checkbox"/>		SEARCH PATTERNS USED: Contour and Parallel	
SEARCH VISIBILITY: (Distance you can see an auto clearly) <u>3</u> NM		SEARCH ALTITUDE: (Above ground) <u>700</u> AGL	SEARCH SPEED: <u>100</u> Kts
TRACK SPACING: <u>1</u> NM			
SECTIONAL GRIDS #	(A B C D, #	(A B C D, #	(A B C D, #
SEARCHED: (Numbers)	<u>374</u>	<u>346</u>	
SEARCHED: Route / Electronically <u>N/A</u> to to to			
TIME OF DAY: <u>07:30</u> to <u>10:00</u>		Crew Comments about Effectiveness Exec <input checked="" type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor <input type="checkbox"/>	
OBSERVERS/ SCANNERS: Number <u>3</u>		Crew Remarks of SAR Effectiveness <u>The coffee' mocha could have used a touch more cinnamon</u>	

How far can you see a car and recognize it as a car?



Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

Search visibility

How far can you see a car and recognize it as a car?

Typical distances are from 3 to 5 miles on a clear day.

Any thing over 5 mile and you must have antelope eyes!

The CAP Form 104

Crew Effectiveness Factors

(Ten for ten)

Rate each item from 1 to 10

Ability to maintain optimum altitude and airspeed
Favorable meteorological visibility and weather conditions
Nature of terrain and/or sea conditions
Optimum track spacing and track spacing flown
Qualification and availability of scanners
Accuracy of navigation (consider aid used and available)
Enough time in search area to allow thorough search
Attitude and physical condition of search crew after flight
Adequate crew rest before flight
Quality of lunches, coffee, water, etc.

Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

How do you rate crew effectiveness?

Well you take the top ten items and rate each item from one to ten.

The CAP Form 104

Crew Effectiveness Factors

Add them up

Ability to maintain optimum altitude and airspeed	8
Favorable meteorological visibility and weather conditions	6
Nature of terrain and/or sea conditions	5
Optimum track spacing and track spacing flown	9
Qualification and availability of scanners	9
Accuracy of navigation (consider aid used and available)	8
Enough time in search area to allow thorough search	9
Attitude and physical condition of search crew after flight	6
Adequate crew rest before flight	10
Quality of lunches, coffee, water, etc.	6
	<hr/>
	76 %

Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

After you do that, you added them up and hang a percentage sign on the total.

Now you have a number for crew effectiveness!

The CAP Form 104

Crew Effectiveness Factors

Rate the Result

100 to 80 % Excellent

80 to 60 % Good

60 to 40 % Fair

40 to 10 % Poor

at 76 % Crew Effectiveness is Good

Arizona Wing Civil Air Patrol Operations Training Program

Paper Wars Series

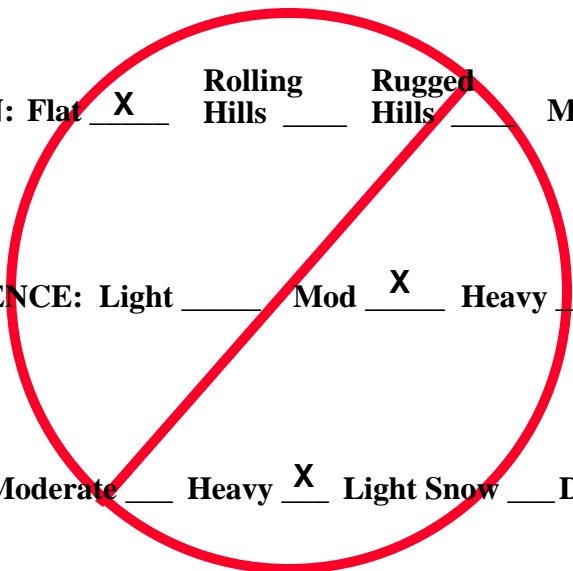
The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

Take this number and compare with the Excellent, Good, Fair or Poor rating.

It is important to give the proper prospective. This information may weigh heavily into determining the number of flights that a single each grid should have.

AZ WING Operation Training Instructor Notes

The CAP Form 104



TERRAIN: Flat X Rolling Hills Rugged Hills Mtns

TURBULENCE: Light Mod X Heavy

COVER: Open Moderate Heavy X Light Snow Deep Snow

Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

Time to describe the search area.

What kind of information do you get from these checks?

Actually this kind of information is preferred to no information at all.

AZ WING Operation Training Instructor Notes

The CAP Form 104

TERRAIN:	Flat 70%	Rolling Hills 10%	Rugged Hills 20%	Mtns 10%
TURBULENCE:	Light 10%	Mod 20%	Heavy _____	
COVER:	Open 50%	Moderate 20%	Heavy 15%	Light Snow 10%
	Deep Snow 5%			

Debriefing

Accounting

Debriefing

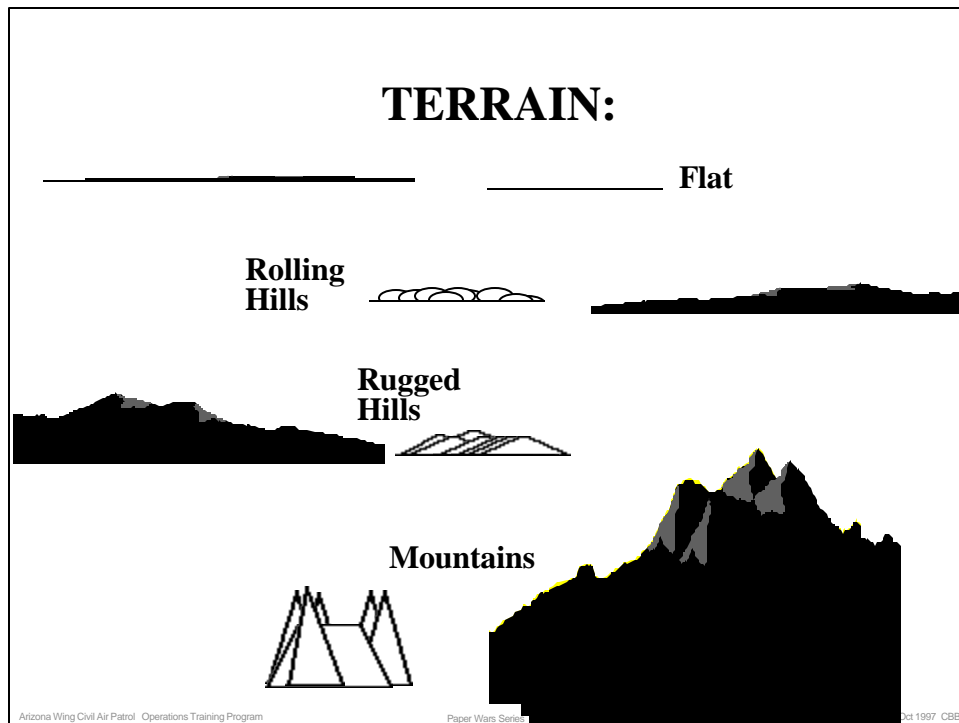
Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

This is a better example.

We all know that the area changes a lot within a grid. So why not report it.

Using percentages gives a lot more detail information to the mission coordinator.

The CAP Form 104



Here is an example of determining terrain.

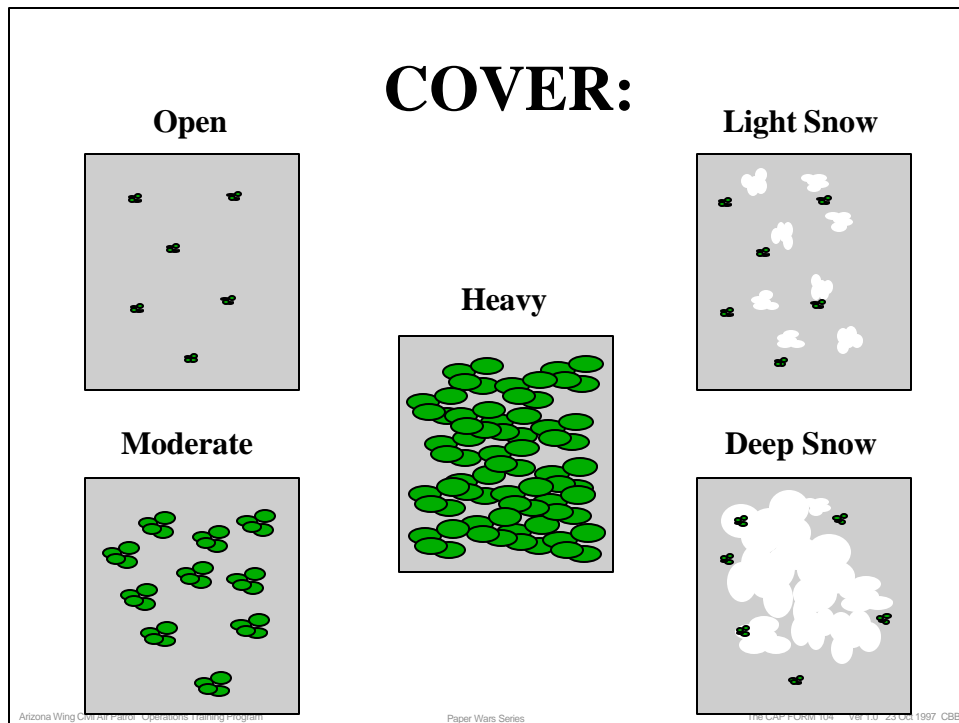
You have flat terrain.

You have the rolling hills.

You have the rugged hills

and you have the Mountainous areas.

The CAP Form 104



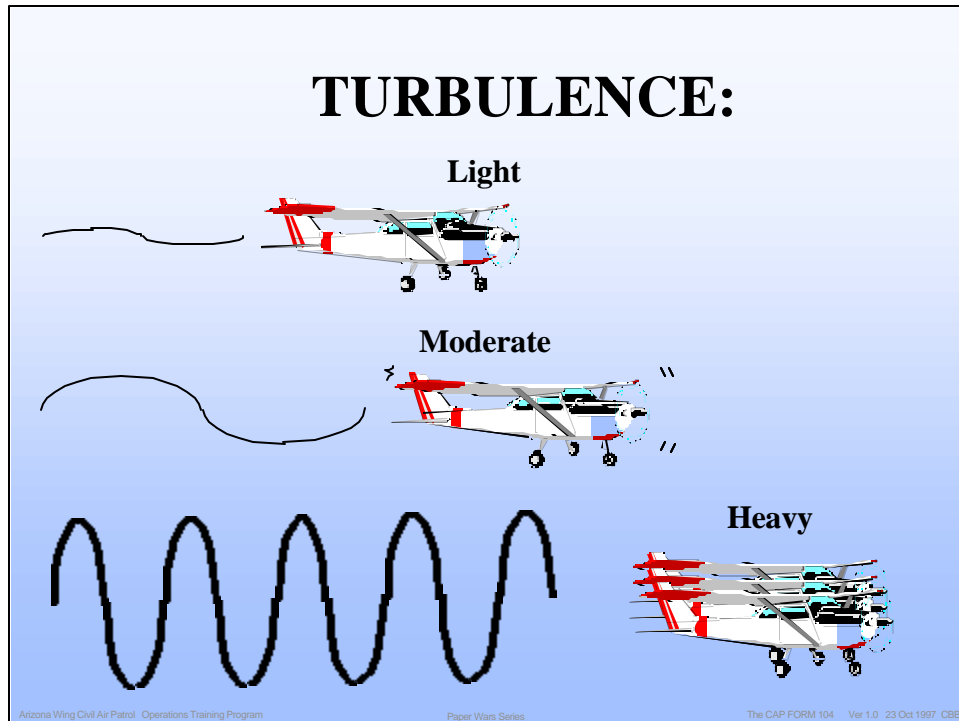
What the cover like.

Can you search object be hiding underneath something?

Is the cover open? Moderate? Heavy?

Do you have light or deep snow?

The CAP Form 104



How was the flight?

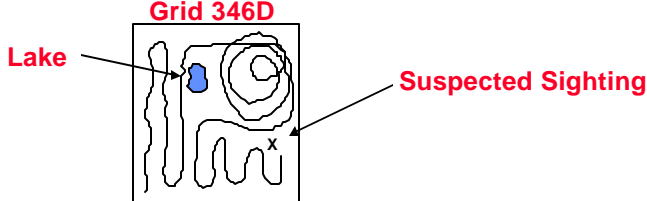
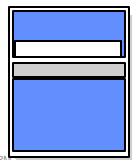
Did you experience light chop?

Moderate turbulence?

Or was time to do some serious head banging without the music?

AZ WING Operation Training Instructor Notes

The CAP Form 104

COORDINATES OF SIGHTINGS: (Lat / Long)		VOR Radials
33° 54' 23" 114° 46' 58" GPS		120° PHX 280° DLG
NOTE: If part of grid as searched, draw area covered below in relation to landmarks. indicate sightings.		
<p style="text-align: center;">Grid 346D</p> 		
		
<small>Arizona Wing Civil Air Patrol Operations Training Program Paper Wars Series The CAP FORM 104 CBB</small>		

This is great for all you art majors. Draw a map of what you did. And if you have a sighting, include it in the map and give the longitudinal and latitudinal coordinates.

Always a good idea to also include any VOR radials

AZ WING Operation Training Instructor Notes

The CAP Form 104

OPEN, FLAT TERRAIN					MODERATE TREE COVER AND OR HILLY					HEAVY TREE COVER AND OR VERY HILLY				
SEARCH ALTITUDE (AGL)	SEARCH VISIBILITY				SEARCH ALTITUDE (AGL)	SEARCH VISIBILITY				SEARCH ALTITUDE (AGL)	SEARCH VISIBILITY			
Track Spacing	1 m	2 m	3m	4 m	Track Spacing	1 m	2 m	3m	4 m	Track Spacing	1 m	2 m	3m	4 m
500 Ft					500 Ft					500 Ft				
.5 mi	35%	60%	75%	75%	.5 mi	20%	35%	50%	50%	.5 mi	10%	20%	30%	30%
1.0	20	35	50	50	1.0	10	20	30	30	1.0	5	10	15	50
1.5	15	25	35	40	1.5	5	15	20	20	1.5	5	5	10	10
2.0	10	20	30	30	2.0	5	10	15	15	2.0	5	5	10	10
700 Ft					700 Ft					700 Ft				
.5 mi	40%	60%	75%	80%	.5 mi	20%	35%	50%	55%	.5 mi	10%	20%	30%	35%
1.0	20	35	50	55	1.0	10	20	30	35	1.0	5	10	15	20
1.5	15	25	30	40	1.5	10	15	20	25	1.5	5	5	10	15
2.0	10	20	30	35	2.0	5	10	15	20	2.0	5	5	10	10
1000 Ft					1000 Ft					1000 Ft				
.5 mi	40%	65%	80%	85%	.5 mi	25%	40%	55%	60%	.5 mi	15%	20%	30%	35%
1.0	25	40	55	60	1.0	15	20	30	35	1.0	5	10	15	20
1.5	15	30	40	45	1.5	10	15	20	25	1.5	5	10	10	15
2.0	15	20	30	35	2.0	5	10	15	20	2.0	5	5	10	10

It time for your quiz!

How well did you do?

The backside of the 104 includes this table for calculating the search effectiveness.

AZ WING Operation Training Instructor Notes

The CAP Form 104

SEARCH VISIBILITY: (Distance you can see an auto clearly) <u>3</u> NM		SEARCH ALTITUDE: (Above ground) <u>700</u> AGL		SEARCH SPEED: <u>100</u> Kts	TRACK SPACING: <u>1.0</u> NM
TERRAIN: Flat 30% Rolling Hills 60% Rugged Hills 10% Mtns _____					
COVER: Open 40% Moderate 60% Heavy _____ Light Snow _____ Deep Snow _____					

OPEN, FLAT TERRAIN		MODERATE TREE COVER AND/OR HILLY		HEAVY TREE COVER AND/OR VERY HILLY	
SEARCH ALTITUDE (AGL)	SEARCH VISIBILITY	SEARCH ALTITUDE (AGL)	SEARCH VISIBILITY	SEARCH ALTITUDE (AGL)	SEARCH VISIBILITY
Track Spacing	1 m 2 m 3 m 4 m	Track Spacing	1 m 2 m 3 m 4 m	Track Spacing	1 m 2 m 3 m 4 m
500 Ft		500 Ft		500 Ft	
.5 mi	35% 60% 75% 75%	.5 mi	20% 35% 50% 50%	.5 mi	10% 20% 30% 30%
1.0	20 35 50 50	1.0	10 20 30 30	1.0	5 10 15 50
1.5	15 25 35 40	1.5	5 15 20 20	1.5	5 5 10 10
2.0	10 20 30 30	2.0	5 10 15 15	2.0	5 5 10 10
700 Ft		700 Ft		700 Ft	
.5 mi	40% 60% 75% 80%	.5 mi	20% 35% 50% 55%	.5 mi	10% 20% 30% 35%
1.0	20 35 50 55	1.0	10 20 30 35	1.0	5 10 15 20
1.5	15 25 30 40	1.5	10 15 20 25	1.5	5 5 10 15
2.0	10 20 30 35	2.0	5 10 15 20	2.0	5 5 10 10
1000 Ft		1000 Ft		1000 Ft	
.5 mi	40% 65% 80% 85%	.5 mi	25% 40% 55% 60%	.5 mi	15% 20% 30% 35%
1.0	25 40 55 60	1.0	15 20 30 35	1.0	5 10 15 20
1.5	15 30 40 45	1.5	10 15 20 25	1.5	5 10 10 15
2.0	15 20 30 35	2.0	5 10 15 20	2.0	5 5 10 10

Debriefing

Accounting

Debriefing

Here is how you do it.

Taking the information from above, You looking for the Search visibility, Search Altitude, Tracks pacing and terrain coverage.

Find the column that best fits the terrain coverage. In this case it's moderate cover.

In the same column, go down until you find the group that best fits your altitude above ground.

In that group, look for the track spacing row. Now all that is left is to find the search visibility in that group.

Where the two intersects is the search coverage factor. In this case, it is 30%.

AZ WING Operation Training Instructor Notes

The CAP Form 104

Now That it's Time to Return Home.

**Fill out two copies of the returning CAPF-104
Leave one at the mission base.**

Upon Arrival at Your Home Base

- ✈ Close Your Flight Plan.**
- ✈ Secure and Refuel the Aircraft.**
- ✈ Finish the Paperwork**
- ✈ Address and Stamp the Envelope**
- ✈ Send the 104 to Wing HQ.**

Arizona Wing Civil Air Patrol Operations Training ProgramPaper Wars SeriesThe CAP FORM 104 Ver 1.0 23 Oct 1997 CBB

Now that you are finished with the last sortie of the day, it's time to return home.

You filled out your two copies of the returning CAPF-104 and leave one at the mission base.

Upon arrival at your home base, you close your flight plan.

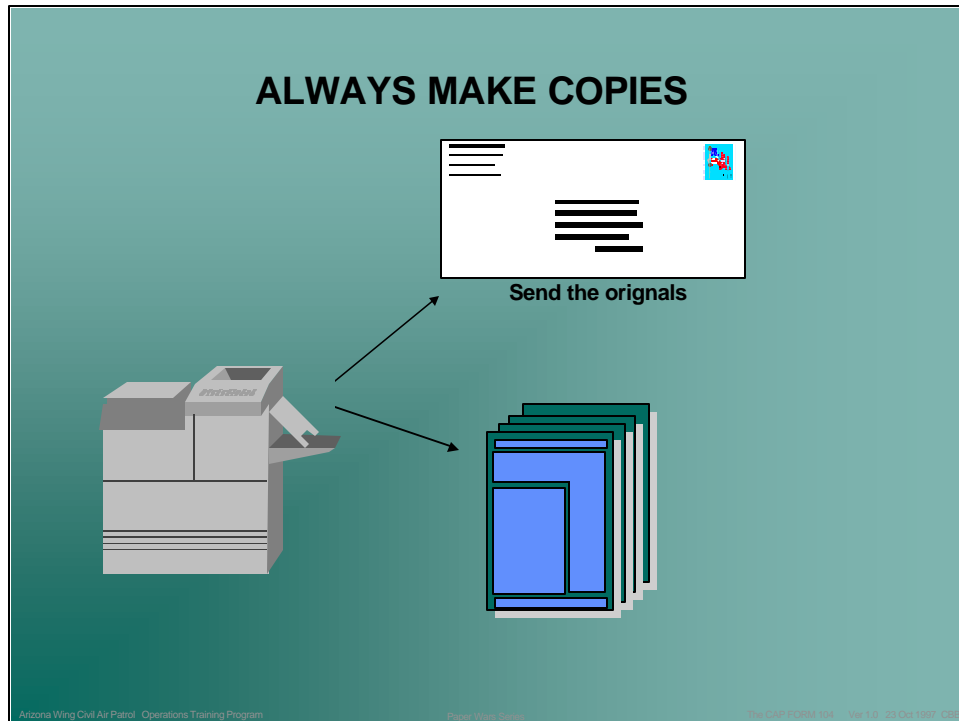
Secure and refuel the aircraft.

And you finish all the paperwork including the 104.

Address and stamp the envelope and send the 104 and any other related forms.

Mail it to Wing HQ on your way home from the airport.

The CAP Form 104

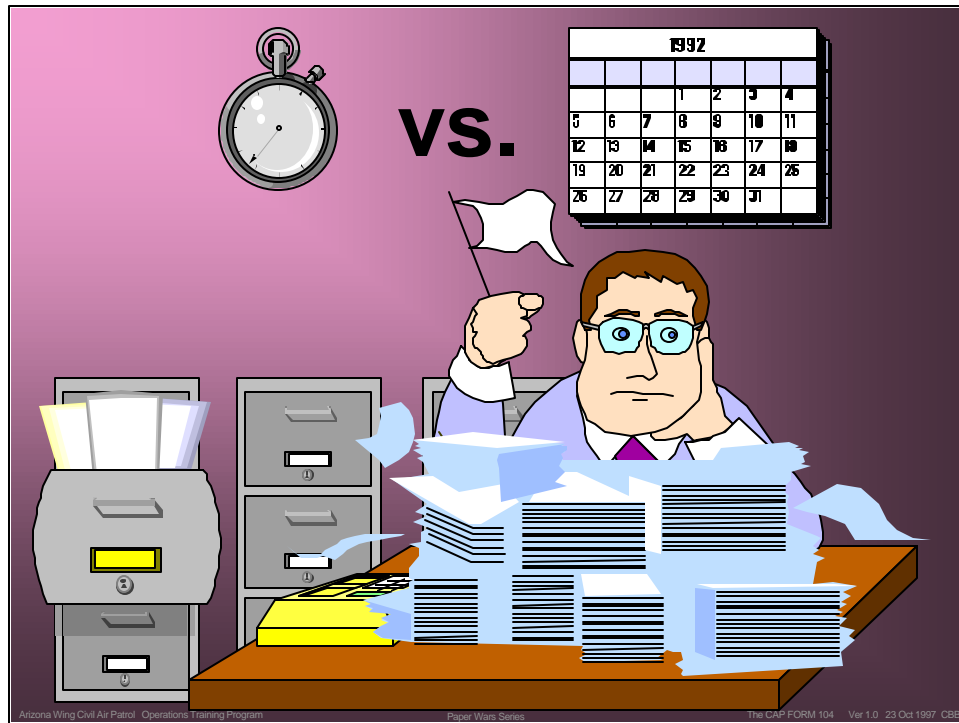


Make sure you always have copy of all forms you send in.

Just in case the Mail does happen to lose your letter.

AZ WING Operation Training Instructor Notes

The CAP Form 104



Time is critical.

The sooner all the paperwork is collected and process, the sooner the Wing and our private supporting aircraft can get reimbursed.

We can not afford to cut our wing's resources by tying up our private supporting aircraft under financial distress.

Imagine if your pay checks were late all the time or some of them held up for over a year. Just because your fellow work mate was either late or had a lot of mistakes on his paperwork.

The CAP Form 104



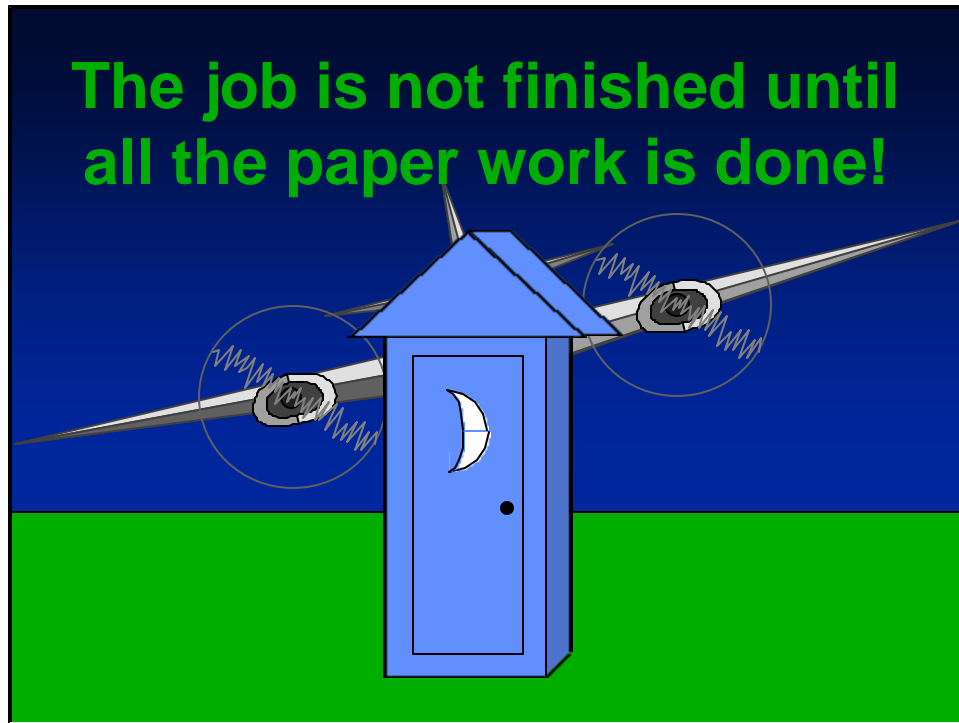
Last words.

The purpose of the training exercise was to show you the minimum information needed on the 104. Because the 104 is a multi-user form for the multiple mission we perform, it is not possible to cover all combinations.

If you are not sure about how to fill in the form for an exception. Ask someone.

When in doubt, you can ask your squadron emergency services or operation training officer. If they don't know, they will find out for you and get back to you.

The CAP Form 104



Always remember, the job is not finished until all the paper work is done.